AMSAT News Service Weekly Bulletins
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ANS editor is BJ Arts, WT0N
Daniel (Dan) James, NN0DJ,
Amsat News Service Assistant Bulletin Editor
SB SAT @ AMSAT $ANS-334.01
MIR OPERATIONS
HR AMSAT NEWS SERVICE BULLETIN 334.01 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.01
The MIREX and SAREX teams report that American astronaut David Wolf has not been active on either the 2 meter or 435 MHz amateur radio equipment aboard MIR since the temporary power outage that occurred on Friday, November 21, 1997. Wolf has stated that powering up the radio equipment is "on his list" and it is hoped that MIR will be back on amateur radio frequencies soon. Please stay tuned to the SAREX reflector for late breaking news.
[ANS thanks Frank Bauer, KA3HDO, for this information]
/EX
SB SAT @ AMSAT $ANS-334.02
W5H SPECIAL EVENT STATION
HR AMSAT NEWS SERVICE BULLETIN 334.02 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.02
Houston, Texas AMSAT Area Coordinator Bruce Paige, KK5DO, will be operating special event station W5H on several amateur satellites this weekend, November 29 and 30, 1997. Sponsored by the Clear Lake Amateur Radio Club of Webster, Texas, W5H is commemorating the end of the Atlantic hurricane season.
Bruce is planning operation on AO-10, FO-20 and 29, AO-27 and RS-12, from 0000z - 0600z and 1500z - 2100z on November 29, and 1500z - 2400z on November 30, 1997. W5H satellite equipment will include an Icom IC-821H and yagi VHF and UHF antennas. W5H will also be operating on all high frequency amateur bands from 160 through 10 meters.
Bruce suggest that satellite operators send W5H QSL card requests (W5H satellite contacts only) directly to him at the following address;
Bruce Paige KK5DO
PO Box 310
Alief, Texas
77411
Stations that make a successful satellite contact with W5H will receive a club certificate and the satellite contact QSL card.
[ANS thanks Bruce Paige, KK5DO, for the information that went into this bulletin.]
/EX
SB SAT @ AMSAT $ANS-334.03
AO-27 CARIBBEAN OPERATION
HR AMSAT NEWS SERVICE BULLETIN 334.03 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.03
Samuel, KD4ESV, announced he will be active on AO-27 from several eastern Caribbean locations during a one week cruise to the area. On air operations will start Sunday, November 30, and continue through though Sunday, December 7, 1997, as time permits. Scheduled operating locations include Miami, followed by St. Martin, St. John and St. Thomas in the Virgin Islands and then several locations in the Bahamas. Equipment will include a 144/435 MHz yagi antenna, one dual band and one 2 meter

handheld and a laptop computer for tracking AO-27 and logging contacts. QSL requests can be directed to the KD4ESV callbook address.
[ANS thanks Samuel, KD4ESV, for the information that went into this bulletin.]
/EX
SB SAT @ AMSAT $ANS-334.04
SPUTNIK-40 OBSERVATIONS
HR AMSAT NEWS SERVICE BULLETIN 334.04 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.04
Many stations, including Clive, G3CWV, and Charles, W9ODI have continued to observe changes in satellite temperature during RS-17 passes at different times of the day and night. Temperature differences are thought to be due to eclipses. A possible explanation of the recent fall in average temperatures may be that the duration of the eclipses has slightly changed.
G3CWV is using a program which checks the eclipse state every two minutes during a pass. Clive found that the percentage of full sunlight has fallen slightly since the initial launch. G3CWV has also used the same program to predict the eclipses of OSCAR-11, and has found the program to give a reasonable correlation, although it does tend to give somewhat early predictions of changes. This may be due to not computing the effect of partial eclipses.
W8RVH, Dayton, Ohio and W8ZCF, Cincinnati, Ohio also continue to take and analyze frequency data from Sputnik's "beep" tone. Their measurements as well as a report from IK1SLD in Italy, shows a decrease in temperature as the satellite proceeds thru the pass. However, in observing an adjacent pass 1 hour 36 minutes later, the temperature has usually recovered at AOS to the "general" higher level. When plotted on a day to day basis, W8RVH reports there appears to be a "sawtooth" pattern for each pass, with the average temperature over several days remaining fairly constant.
W9ODI reports on morning passes where the satellite is coming out of eclipse into sun, a rise in temperature. Chuck is also observing passes at night where the satellite is coming out of sun into darkness, and reports the temperature is definitely dropping.
RS-17 is expected to continue operation into mid-December before its internal batteries are exhausted.
[ANS thanks W9ODI, IK1SLD, G3CWV, W8RVH and W8CVF for this information]
/EX
SB SAT @ AMSAT $ANS-334.05
INTERNATIONAL SPACE STATION UPDATE
HR AMSAT NEWS SERVICE BULLETIN 334.05 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.05
Various published news reports are now saying that NASA will not have the International Space Station fully assembled until December 2003. NASA has pledged that the U.S. habitation module, the astronaut living quarters, will be fully outfitted by December of 2002. However, NASA is also promising that a crew will be on the station starting long before 2002 ends.
AMSAT-NA's VP of Manned Space, Frank Bauer, KA3HDO, indicates that Ham Radio's presence on the station should also happen far sooner than the 2002 date. Frank reports that the current plan is to operate the space station in a "crew tended" fashion sometime beginning in early 1999, just a little over a year from now!
In line with that schedule, Frank says that the ISS Ham Radio team is now working VERY hard to incorporate the first phase of the ISS Ham Radio project...a transportable station...and deliver this equipment to the Johnson Space Center in Houston, Texas for flight certification in June of

next year (1998). Delivery of that equipment to the
space station is now slated for December, 1998.
Stay tuned to ANS for more information on Ham Radio's planned
presence on ISS as it develops.
[ANS thanks the ARRL, Newsline and Frank Bauer, KA3HDO, for
this information]
/EX
SB SAT @ AMSAT $ANS-334.06
CUBA EXPEDITION ACTIVE ON SATELLITE
HR AMSAT NEWS SERVICE BULLETIN 334.06 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.06
For those of you looking for T49C via satellite, Oscar, CO2OJ, reports
he is active on RS-15. Mike, N1JEZ, worked T49C on Saturday, November 29,
at 1819 UTC. T49C is also active on terrestrial VHF, with stations in
the southern US reporting hearing signals from T49C. Oscar recommends
looking for T49C on the morning passes of RS-12 and RS-15.
[ANS thanks Oscar, CO2OJ, and Mike, N1JEZ for this information]
/EX
SB SAT @ AMSAT $ANS-334.07
ARRL OSCAR CALENDAR DISCONTINUED
HR AMSAT NEWS SERVICE BULLETIN 334.07 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.07
The ARRL's support of the OSCAR locator is being discontinued. For some
years now, the League has offered a monthly orbit calendar for use with
the OSCAR locator. According to Jon Bloom, K3EZ, requests for this
monthly listing have dwindled to less than a half dozen. As a result, the
League plans to end this service at year's end. Computer tracking
programs that have been developed in recent years are now widely used by
most active satellite stations.
[ANS thanks the ARRL and Jon Bloom, K3EZ, for this information]
/EX
SB SAT @ AMSAT $ANS-334.08
WEEKLY SATELLITE REPORT PT 1
HR AMSAT NEWS SERVICE BULLETIN 334.08 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.08
MIR
Dave Wolf has stated that powering up the radio is "On his
List" and it is hoped that Mir will be back on the air soon.
As part of ongoing frequency experiments to improve Amateur Radio
operations on board MIR, and to better understand how these frequencies
will be effective on the International Space Station, MIR will begin a
2-phase frequency experiment beginning December 1, 1997 and ending on May
31, 1997.
For phase 1, a 70cm/2m crosslink experiment will operate for a 3 month
period from December 1, 1997 up to March 1, 1998.
On December 1, 1997 the MIR operating frequencies will change to:
Uplink: 437.850 MHz   Downlink: 145.800 MHz
Phase 2 of this experiment will use a 2 meter-only set of uplink and
downlink frequencies. This phase of the experiment will begin on
March 1, 1998 and will also be of 3 months duration.
SAFEX, MIR 70cm Repeater (Uplink 435.750 MHz FM, Downlink 437.950 MHz
FM, subaudible tone 141.3 Hz)
The SAFEX, MIR 70cm repeater is not operational at this time.
[ANS thanks the MIREX team for this information]
RS-10
(Uplink 145.865-145.905 MHz CW/SSB, Downlink 29.36-29.4 MHz CW/SSB)
Not operational at this time.
RS-12

(Uplink, 145.91-145.95 MHz CW/SSB, Downlink 29.41-29.45 MHz)
Operational, now in mode A. Lots of activity over North America with
good downlink signal reports being received. T49C reported active from Cuba.
RS-15
(Uplink 145.858-145.898 MHz CW/SSB, Downlink 29.354-29.394 MHz CW/SSB)
Operational. (Hint: If SSB doesn't work for you, try CW. CW is very easy
to hear on the downlink)!
RS-16
Transponder information on RS-16.
Uplink = 145.915 - 145.948 MHz
Downlink = 29.415 - 29.448 MHz
Beacons = 29.408 and 29.451 MHz
Pwr 29 MHz Down = 1.2 W /4 W
Beacon 1 = 435.504 MHz
Beacon 2 = 435.548 MHz
Pwr 435 MHz Beacons = 1.6 W
RS-17
Operational. 145.820 MHz
QSL Information is as follows:
Sergej Samburov (or) FR5KJ Radio Club
PO Box 73 College Jules Reydellet
Kaliningrad - 10 City 103 Rue de la Republique
Moscow Area 10470 97 489 Saint Denis Cedex
Russia Reunion Island , France
AO-10
(Uplink 435.030-435.18 MHz CW/LSB, Downlink 145.975-145.825 MHz
CW/USB)
Operational. Stacey Mills, W4SM, would appreciate any perigee
observations of AO-10's beacon or transponder during the next several
weeks until conditions begin to improve. If his orientation figures are
correct, AO-10 should be down to a solar angle of -84 degs with only 11%
illumination. Send reports to w4sm@amsat.org
[ANS thanks Stacey Mills, W4SM, for this report]
AO-27
(Uplink 145.85 MHz FM, Downlink 436.792 MHz FM)
Operational with lots of activity including QRP stations heard over
North America. The control ops have programmed AO-27 to start earlier in
its pass.
[ANS thanks Michael Wyrick, N4USI, AO-27 Control-op, for this update]
FO-20
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Operational. FO-20 in mode JA continuously.
[ANS thanks Kazu Sakamoto, JJ1WTK, for this report]
FO-29
Voice/CW Mode JA
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Digital Mode JD
(Uplink 145.85, 145.87, 145.910 MHz FM, Downlink 435.910 MHz FM 9600
baud BPSK)
Operational. FO-29 was in JA mode on November 29, 1997.
[ANS thanks Kazu Sakamoto, JJ1WTK, for this report.]
/EX
SB SAT @ AMSAT $ANS-334.09
WEEKLY SATELLITE REPORT PT 2
HR AMSAT NEWS SERVICE BULLETIN 334.09 FROM AMSAT HQ
SILVER SPRING, MD, NOVEMBER 30, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-334.09
KO-23
(Uplink 145.85, 145.9 MHz FM, Downlink 435.175 MHz FM,
9600 Baud FSK)
KO-23 has variable, but generally low, downlink efficiency.
Stacey Mills, W4SM, has estimated the keps show that KO-23 will not
experience an eclipses again until December 12th. During the orbits of

that day, eclipses rapidly increase in duration from 2 to 11 minutes. Eclipse length will then continue to increase, peaking at 35 minutes per orbit in the December 28th thru January 4th time period. Eclipse length will then begin slowly decreasing again. KO-23's download efficiency has dropped dramatically due to the increasing heat and its affects on the signal deviation.
[ANS thanks Stacey Mills, W4SM, and Jim Weisenberger, AA7KC, for this report]
KO-25
(Uplink 145.980 MHz FM, Downlink 436.5 MHz FM, 9600 Baud FSK.)
KO-25 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for this report]
OSCAR-11
(Downlink 145.825 MHz. FM, 1200 Baud PSK. Beacon 2401.500 MHz)
Operating normally. During the period of October 14th through November 16th this satellite has continued to provide good signals on its 145.826 MHz beacon.
The operating schedule is unchanged.
ASCII status (210 seconds)
ASCII bulletin (60 seconds)
BINARY SEU (30 seconds)
ASCII TLM (90 seconds)
ASCII WOD (120 seconds)
ASCII bulletin (60 seconds)
BINARY ENG (30 seconds)
There are also additional status blocks after each bulletin is transmitted, and between ASCII TLM and WOD.
The mode-S beacon is ON, transmitting an unmodulated carrier, but telemetry indicates that it has partially failed, and delivering half power. This beacon is a useful test source for those testing mode-S converters, prior to the launch of P3-D. It is considerably weaker than DOVE, which should be used for initial testing. Any reports of reception on 2401.00 MHz would be most welcome. Please e-mail reception reports to g3cwv@amsat.org.
The 435.025 MHz beacon is normally OFF. However it can sometimes be heard when the satellite is being commanded by ground control, (i.e. within range of Guildford, UK). When the 435 beacon is transmitting, the 145 beacon is normally OFF. The data transmitted is mainly binary.
OSCAR-11 users are welcome to visit the G3CWV web site. It contains some software for capturing data, and decoding ASCII telemetry and the WOD survey. There is an archive of raw data (mainly WOD) for analysis, which is continually being expanded, as new data is captured.
The URL is - http://www.users.zetnet.co.uk/clivew/
[ANS thanks Clive Wallis, G3CWV, for this information]
AMSAT-OSCAR-16 (PACSAT)
(Uplink 145.9, 145.92, 145.94, 145.86 MHz FM, 1200 bps Manchester FSK
Downlink 437.0513 MHz SSB, 1200 bps RC-BPSK 1200 Baud PSK.
Beacon 2401.1428 MHz.)
Operating normally.
State of the batteries at the end of an eclipse orbit.
Uptime is 1168/17:19:55. Time is Sat Nov 29 22:47:42 1997
Bat 1 V= 1.259 V Bat 2 V= 1.295 V
Bat 3 V= 1.287 V Bat 4 V= 1.323 V Bat 5 V= 1.267 V
Bat 6 V= 1.281 V Bat 7 V= 1.281 V Bat 8 V= 1.312 V
Total Array C= 0.000 Bat Ch Cur=-0.560 Ifb= 0.158 I+10V= 0.424
TX:010C BCR:1E PWRC:59F BT: A WC:25 EDAC:45
Information about telemetry values and WOD files can be found at
http://www.arrakis.es/~ea1bcu/wod.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]
DO-17(DOVE)
(Downlink 145.825 MHz FM, 1200 Baud AFSK. Beacon 2401.220 MHz)
DOVE transmits on 145.825 MHz and 2401.220 MHz. It is presently sending 1200 baud AX.25 (standard packet) ASCII telemetry about

every minute on two meters. On S band it transmits PSK flags
continuously and also the same data as is sent on 2 meters.
Jim White, WD0E, reports that QSL requests for DO-17 have been well
received, with recent requests including one from Germany. Jim notes
he will be putting the QSL availability info on the DOVE two meter
broadcast in the next few days.
[ANS thanks Jim White, WD0E, for this update]
WEBERSAT (WO-18)
(Downlink 437.104 MHz SSB, 1200 Baud PSK AX.25)
No report available at this time.
LUSAT-OSCAR-19
(Uplink 1200 bps Manchester FSK Uplinks: 145.84, 145.86, 145.88,
145.90 MHz FM, Downlink 437.125 MHz SSB, 1200 bps RC-BPSK.)
Operating normally.
Uptime is 893/08:21:52. Time is Sat Nov 29 22:27:02 1997
[BEACON]
November 6 - 1997.
BBS is open.
Uplink qrg: 145.840, 860, 880, 900
Norberto - LU8DYF.
General information and telemetry samples can be found at:
http://www.arrakis.es/~ea1bcu/lo19.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]
UO-22
(Uplink: 145.900 or 145.975 MHz FM. Downlink 435.120 MHz FM
9600 Baud FSK)
UO-22 is operating normally.
Chris Jackson, G7UPN/ZL2TPO, has reloaded the Store and Forward
communications task on the UO-22 On-Board Computer. This task includes
incremental checksums which should make uploading slightly faster.
In the old task, once an upload was complete, the spacecraft had to
perform the checksum on the complete file. Depending on the file
length, this could take quite a long time. With the new task, the
checksum is computed on the fly - while the data is actually being
uploaded. Thus there is no need to recompile at the end of the
transfer and this checksum delay is then removed.
However, all files that were started before Chris loaded the task
will receive a corrupt body checksum error when the upload is completed.
If anyone gets persistent body checksum errors while uploading files to
UO-22 would they please let Chris Jackson know as soon as possible
[ANS thanks Chris Jackson, G7UPN/ZL2TPO, Ground station and
Operations Manager of UO-22, for this report]
IO-26 (ITAMSAT)
Uplink 145.875, 145.900, 145.925, 145.950 MHz FM, Downlink 435.822 MHz
SSB, 1200 Baud PSK)
IY2SAT-1>AMSAT <UI>:
12th November 1997
All sub-systems are OK.
Loading in progress.
Please don't tx on uplink. Stay tuned for further news!
Best wishes from the ITAMSAT team.
[ANS thanks Daniele, IK2XRO, and Piercarlo, IW2EGC,
ITMSAT Command Station for this report]
[Please send your Satellite or News reports to ANS Editor BJ Arts,
WT0N, via e-mail, at bjarts@the-bridge.net or to wt0n@amsat.org]
/EX

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